

An additional six reaches are located at and above Wilmington on the Northeast Cape Fear River. Collectively the basins and ranges are referred to as Wilmington Harbor and extend about 35 miles.

At the time the Underwater Archaeology Unit conducted the survey in 1993, the Corps of Engineers Federal Project was authorized to maintain a main channel 40 feet deep and 500 feet wide from the Atlantic Ocean through the ocean bar and entrance channels (including Baldhead Shoal, Smith Island, Baldhead-Caswell, Southport, and Battery Island Channels). However, because of dredging inaccuracies and rock obstructions, the authorized depth of 40 feet has not been achieved at Smith Island or Baldhead Shoal Channel. From the entrance channels to the upper end of the anchorage/turning basin at the Cape Fear Memorial Bridge the Corps has been authorized to maintain the main channel at 38 feet deep and 400 feet wide. From the Cape Fear Memorial Bridge to the Hilton Railroad Bridge over the Northeast Cape Fear River, a channel 32 feet deep and 400 feet wide is maintained (including a turning basin of the same depth). The channel is maintained at a depth of 25 feet and a width of 200 feet from the Hilton Railroad Bridge to a point 1.7 miles above the bridge. A turning basin located 1.25 miles above the Hilton Railroad Bridge is also dredged to the same depth (USACOE report 18 September 1992).

Additional projected improvements include the Turns and Bends project, Baldhead Shoal Channel rock dredging, widening Smith Island channel and the Northeast Cape Fear River project. The Turns and Bends project consists of widening six turns and bends below Wilmington by 75 to 140 feet. The Northeast Cape Fear River project includes:

Widening of the Fourth East Jetty Channel 100 feet to the west at the existing project depth of 38 feet for a distance of about 8,000 feet.

Deepening the navigation channel from the project depth of 32 feet to 38 feet at a width of 400 feet between Cape Fear Memorial Bridge and the NC 133 Bridge.

Widening the turning basin just upstream from the mouth of the Northeast Cape Fear River by 50 feet on the west side at a project depth of 38 feet.

Deepening the navigation channel from a project depth of 32 feet to 38 feet at a width of 300 feet from the NC 133 Highway Bridge to the Hilton Railroad Bridge, located 2,600 feet upstream, and deepening the navigation channel from a project depth of 25 feet to 38 feet at a width of 200 feet from the Hilton Railroad Bridge to a point approximately 750 feet upstream (USACOE report 18 September 1992).